

Specifications — MSW 4 rs Series Switchers

Video — MSW 4V rs, MSW 4SV rs

Gain	Unity
Bandwidth	
MSW 4V	300 MHz (-3 dB)
MSW 4SV	250 MHz (-3 dB)
Crosstalk	<-60 dB @ 3.58 MHz
Switching speed	20 ms (max.)

Video — MSW 4V SDI rs

Resolution	8 or 10 bits, automatic
Operation standards	143 Mb/s ($4f_{sc}$ NTSC) 177 Mb/s ($4f_{sc}$ PAL) 270 Mb/s (4:2:2) component video 360 Mb/s (4:2:2) widescreen, autoselect
Equalization and reclocking	Automatic for up to -30 dB of cable loss
Automatic data rate clock	Yes

Video input

Number/signal type	
MSW 4V rs	4 composite video
MSW 4SV rs	4 S-video
MSW 4V SDI rs	4 serial digital component video
Connectors	
MSW 4V rs, MSW 4V SDI rs	4 female BNC
MSW 4SV rs	4 female 4-pin mini DIN
Nominal level	1 V _{p-p} for Y of S-video and for composite video 0.3 V _{p-p} for C of S-video 0.8 V _{p-p} for SDI
Minimum/maximum levels (MSW 4V rs, MSW 4SV rs)	0.4 V to 2.0 V _{p-p} with no offset
Impedance	75 ohms
Return loss	
MSW 4SV rs	<-25 dB, DC @ 10 MHz
Other models	<-40 dB, DC @ 10 MHz
DC offset (max. allowable)	5.0 V
Input coupling	
MSW 4V rs, MSW 4SV rs	DC
MSW 4V SDI rs	AC

Video output

Number/signal type	
MSW 4V rs	2 composite video
MSW 4SV rs	1 S-video, 1 composite video
MSW 4V SDI rs	2 reclocked SMPTE-259 serial digital component video
Connectors	
MSW 4V rs, MSW 4V SDI rs	2 BNC female
MSW 4SV rs	1 BNC female, (1) 4-pin mini DIN female
Nominal level	1 V _{p-p} for Y of S-video and for composite video 0.3 V _{p-p} for C of S-video 0.8 V _{p-p} for SDI
Minimum/maximum levels (MSW 4V rs, MSW 4SV rs)	0.4 V to 2.0 V _{p-p}
Impedance	75 ohms

Return loss	
MSW 4V/4SV rs	<-30 dB @ 5 MHz
MSW 4V SDI rs	<-25 dB @ 5 MHz
DC offset	±5 mV maximum with input at 0 offset
Switching type (MSW 4V rs/4SV rs)	Vertical interval
Jitter (MSW 4V SDI rs)	<2 µs
Rise/fall time (20-80%, MSW 4V SDI rs)	700 ps ±100 ps
Re-clocking (MSW 4V SDI rs) ...	Automatic, bypass mode for nonstandard rates

Sync

Standards	
MSW 4V rs, MSW 4SV rs	NTSC 3.58, NTSC 4.43, PAL, SECAM
MSW 4V SDI rs	SMPTE-259M

Control/remote — switcher

Serial control port	1 RS-232, 3.5 mm captive screw connector, 5 pole
Baud rate and protocol	9600 baud, 8 data bits, 1 stop bit, no parity
Serial control pin configurations	1 = TX, 2 = RX, 3 = GND
Contact closure	(1) 3.5 mm captive screw connector, 5 pole
Contact closure pin configurations	1 = input 1, 2 = input 2, 3 = input 3, 4 = input 4, 5 = GND
Program control	Extron's Universal Switcher program for Windows® Extron's Simple Instruction Set (SIS™)

General

External power supply	100 VAC to 240 VAC, 50/60 Hz, external, autoswitchable; to 12 VDC, regulated
Power input requirements	
MSW 4V rs, MSW 4SV rs	12 VDC, 0.2 A
MSW 4V SDI rs	12 VDC, 0.4 A
Temperature/humidity	Storage: -40 to +158 °F (-40 to +70 °C) / 10% to 90%, noncondensing Operating: +32 to +122 °F (0 to +50 °C) / 10% to 90%, noncondensing
Rack mount	Yes, with optional 1U, 9.5" deep rack shelf, part #60-190-01 or 60-604-01; or 6" deep rack shelf, part #60-190-10 or #60-604-10; or VersaTools® 3" deep rack shelf, part #60-190-20 or 60-604-20; also under-furniture mountable with optional brackets #70-212-01
Enclosure type	Metal
Enclosure dimensions	1.7" H x 4.3" W x 3.0" D (1U high, quarter rack wide) 4.3 cm H x 10.9 cm W x 6.5 cm D (Depth excludes connectors.)
Product weight	0.6 lbs (0.3 kg)
Shipping weight	3 lbs (2 kg)
Vibration	ISTA 1A in carton (International Safe Transit Association)
Listings	UL, CUL
Compliances	CE, FCC Class A, VCCI, AS/NZS, ICES
MTBF	30,000 hours
Warranty	3 years parts and labor

NOTE All nominal levels are at ±10%.

NOTE Specifications are subject to change without notice.

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